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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/673,027	09/26/2003	Yann Le Gallo	60130-1894;02MRA0144	8046

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EXAMINER	
COLON SANTANA, EDUARDO	

ART UNIT	PAPER NUMBER
2837	

DATE MAILED: 05/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/673,027	LE GALLO, YANN	
	Examiner	Art Unit	
	Eduardo Colon-Santana	2837	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 February 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☒ Other: *Detailed Action*.

DETAILED ACTION

1. Applicant's amendments filed on 2/11/2005 have been received and entered in the case.

2. Applicant's arguments with respect to the claims have been fully considered but they are still not persuasive.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless -
>
> (b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-4, 6-15 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by O'Connor et al. in publication WO 01/36772 A1.

Referring to claims 1-4, 14 and 15, O'Connor et al. discloses an integrated obstacle detection system as claimed (see all figures and respective portions of the specifications). O'Connor et al. further states the use of direct (non-contact) detectors and indirect (contact) detectors to directly and indirectly detect an obstruction (see Fig. 9 and pages 21-29). Moreover, O'Connor et al. discloses that the direct (non-contact) detector may be of various type of sensors (page 10, line 24-27), however for this embodiment he uses a light sensor, which detects a light distribution affected by any obstruction (see figure 2A-2C). Additionally, O'Connor et al. describes the use of indirect (contact) detectors and mentions various manners in which an obstruction may be detected indirectly (see pages 21 and 22).

O'Connor et al. states that the output of the electric motor (Torque)[1] can also be used to indirectly detect an obstruction (see page 25, lines 3-7). Finally, O'Connor et al. show in figure 9 a controller (analyzing circuit) (202), which analysis (compares) both detecting system to determined if an obstruction is present to stop movement or reverse its motion (see page 28, lines 26-32).

As to claims 7-9, the method steps are inherent in the product structure discussed above. Discussion is omitted.

Referring to claims 6, 11 and 17, the non-contact (direct) detector detects obstructions according to the position information provided by the contact (indirect) detector (see page 24, lines 11-23).

As to claim 10, O'Connor et al. discloses a memory (106 or 204), which is used to store values and update the reference distribution.

Referring to claims 12 and 13, O'Connor et al. addresses all the limitations of claims 7-9, in addition to disclosing that a predetermined threshold has been stored in memory to adjust the difference between the energy levels when an obstacle is detected. Furthermore, O'Connor et al. states that the system has the capacity to dynamically (variable) adjust variations in the reflected radiation (see page 26, lines 6-30).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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[1] Torque = The product of a force acting at a distance.

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 5 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over O'Connor et al in view of Breed et al. U.S. Patent No. 6,442,465.

Referring to claims 5 and 16, O'Connor et al. addresses all the limitation of claims 1 and 14 and mentions the use of light sensors. However, he does not explicitly teach nor describes that the light sensor is a charge coupled device sensor (CCD). On the other hand, Breed et al. discloses a vehicular component control system based on pattern recognition using optical sensors and optical images of a person, wherein a charge coupled device sensor (CCD) is used. Since O'Connor et al. and Breed et al. are in the same field of endeavor of detecting an object, the purpose disclosed by Breed et al. would have been recognized in the pertinent art of O'Connor. It would have been obvious to one of ordinary skill in the art at the time of the invention to use a charge coupled device sensor as used by Breed et al. within the teaching of the light sensors in O'Connor et al. for the purpose/advantages that by using a charge coupled device sensor (CCD) it improves the measurement in the x and y dimensions, thereby acquiring a wider range to detect an object. Additionally, CCDs commonly respond to about 70% of the incident light and are sensitive to infrared light, which allows low light intensities, even for ultraviolet and visible wavelengths to be detected.

Response to Arguments

5. Applicant's arguments have been fully considered but they are not persuasive.

It is believed that the references read on the amended claims as they have been presented.

In response to applicant's arguments that there is no teaching or suggestion in O'Connor (WO 01/36772) for an obstruction detection system that includes an indirect detector that outputs information position to the direct detector, see figure 9 of O'Connor, which clearly depicts one in-direct obstacle detectors and one direct obstacle detector joined by a controller 202 which receives and transmits position information to dynamically adapt each detector output signal. The information goes both to and from each obstacle detector.

In regards to the arguments of claims 5 and 16, O'Connor indeed teaches an obstruction detection system that includes a controller 202, which receives and transmits position information from the obstacle detectors to dynamically adapt each detector output signal.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eduardo Colon Santana whose telephone number is (571) 272-2060. The examiner can normally be reached on Monday thru Thursday 6:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Martin can be reached on (571) 272-2800 X.37. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ECS
April 29, 2005

DAVID MARTIN
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